

Self-Aligning Insert for Drill Bits

Abstract

The present invention is generally directed to various embodiments of a self-aligning insert for use with roller cone drill bits. In one illustrative embodiment, the insert comprises a generally cylindrical body, a cutting surface, a bottom surface, a tapered surface adjacent the cylindrical body, and a generally cylindrical section positioned between the bottom surface and the tapered surface. The inserts of the present invention may be installed in a roller cone of a roller cone drill bit.